ABSTRACT

The object of the present invention is to provide a method for solving the problem of surface damage due to gallium ion irradiation that poses a problem when carrying out mask repair using currently established FIB techniques, and the problem of residual gallium, and to provide a device realizing this method. The device of the present invention has electron beam lens barrel that out processing, as well as an **FIB** lens barrel. provided inside the same sample chamber, which means that a mask repair method of the present invention, in correction processing to remove redundant sections such as a mask opaque defect, phase shift film bump defect or a glass substrate cut remnant defect, comprises a step of coarse correction by etching using a focused ion beam and a step of finishing processing using an electron beam, to remove surface damage due to gallium irradiation, and residual gallium.